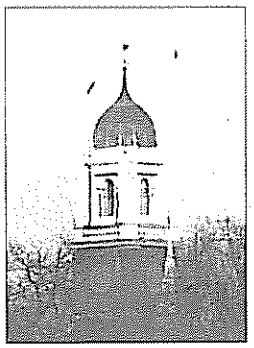

CITY OF WARWICK
PLANNING DEPARTMENT

CITY HALL ANNEX
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SCOTT AVEDISIAN
Mayor

MARK CARRUOLO
Director

Office of Planning

Office of Community Development

Office of Landscape Architecture

Planning Board

Warwick Station Redevelopment Agency

Zoning Board

Conservation Commission

Harbor Management Commission

Historic District Commission

Historic Cemetery Commission

January 31, 2006

Ms. Carol Lurie, AICP
Senior Planner
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RE: City of Warwick Comments - Part 1
"Group 1 Affected Environment"
Environmental Impact Statement (EIS)
T.F. Green Airport by Vanasse Hangen Brustlin, Inc., (VHB)

Dear Ms. Lurie,

Please find enclosed the first of two documents containing the City of Warwick comments on the draft "Group 1 Affected Environment Analysis" conducted by Vanasse Hangen Brustlin, Inc., (VHB) for the T.F. Green Airport Environmental Impact Statement (EIS).

I understand the time constraints of the project and have forwarded you the following sections; ***4.11 Study Area, 4.15 Coastal Resources, 4.13 Wetlands and Waterways, 4.13.2 Evaluation of Wetland, Functions and Values, 4.13.2 Wetlands South of Project Area, 4.13.3 Summary, 4.11 Fish, Wildlife and Plants, 4.11.4 Summary, 4.5 Surface Transportation "Study Area Intersections".***

Due to the length of the documents, the Planning Department will forwarded the remainder of our comments by February 3, 2006. The time afforded the City for comment is greatly appreciated.

If you should have, any questions regarding these comments please feel free to call me at 738-2000.

Sincerely,

Mark Carruolo
Planning Director

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PLANNING DEPARTMENT

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Historic Cemetery Commission

Memorandum

To: Mark Carruollo, Planning Director

From: William J DePasquale, ~~AICP~~
Principal Planner

Date: January 26, 2006

Re: City of Warwick Comments Section 1 of 2

Draft *"Group 1 Affected Environment"*
Environmental Impact Statement (EIS), T.F. Green Airport
Vanasse Hangen Brustlin, Inc., (VHB)

The draft "Group 1 Affected Environment DEIS sections" of the EIS is scheduled to be reviewed by the EIS review team.

Affected Environment Sections
Group 1

*Surface Transportation**
Water Quality
*Fish, Wildlife, and Plants**
Threatened and Endangered Species
*Wetlands and Waterways**
Floodplains
*Coastal Resources**
Farmland Soils
Hazardous Materials

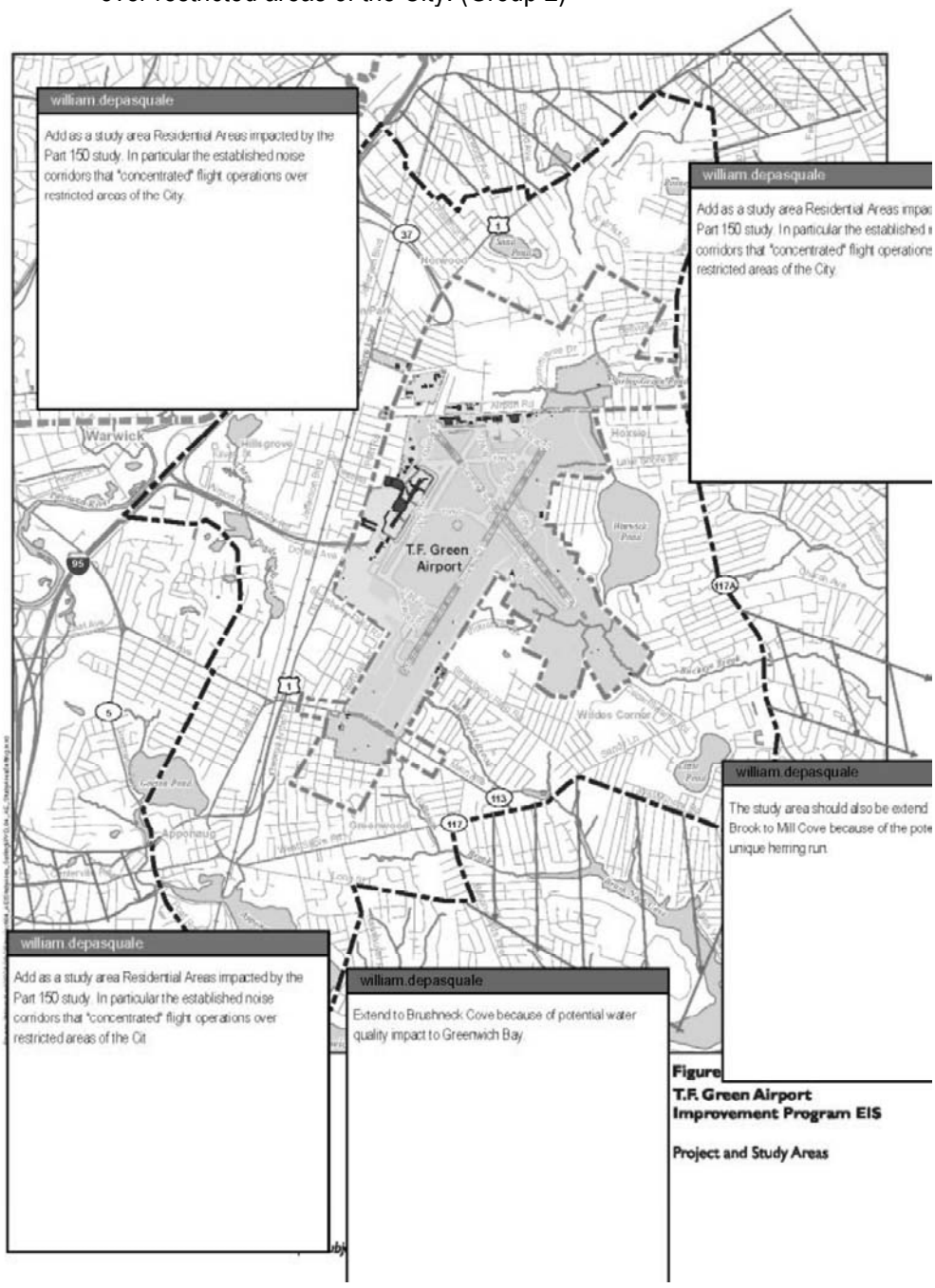
** Section 1 of 2*

The following resource areas should be amended, included and/or expanded within the "Group 1 Affected Environment " section of the EIS. I have included a summary of my comments concerning the documents made available to the City.

ATTACHMENT

4.11 Expanded Study Area

- The study area should also be extending to include Buckeye Brook to Mill Cove because of the potential impact to the unique herring run.
- Extend study area to Brushneck Cove because of the on-field discharges impact on water quality in Greenwich Bay.
- Add as a study area Residential Areas impacted by the Part 150 study. In particular the established noise corridors that "concentrated" flight operations over restricted areas of the City. (Group 2)



4.15 Coastal Resources

"*Under the CZMP (administered by the RICRMC) jurisdiction over tidal waters extends landward from the territorial sea limit three miles off shore and includes upland areas within 200 feet of the coastline… the RICRMC has jurisdiction over specific activities within all upland areas that have the potential"*

ADD: Under newly promulgated regulations the CRMC maintains jurisdiction over enforcement of the freshwater wetlands act in a defined area within the City of Warwick.

ADD: Depict boundaries of the CRMC freshwater wetland enforcement area boundary on the map 4-15.1 "Coastal Barrier Resources System".

ADD: In narrative, that groundwater recharge has on Greenwich Bay. Request information from CRMC from University of Rhode Island Groundwater studies By Professor Dan Urish.

4.13 Wetlands and Waterways

"addition to the federal jurisdictional wetlands described above, the provisions of the Rhode Island Fresh Water Wetlands Act (Act) and Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act[3] (Rules), provide for state regulation of freshwater wetlands. The Act is administered by the Rhode Island Department of Environmental Management (RIDEM)."

ADD: CRMC enforces freshwater wetlands in the vicinity of the Coast. Enforcement area boundary to be added to map 4-15.1 entitled "Coastal Barrier Resources System".

ADD: the City of Warwick Zoning Ordinance includes as a "pass through regulation" all RIDEM and CRMC buffer/setback regulations that are adopted as dimensional standards within the zoning ordinance. All deviation sought to the RIDEM and CRMC standards also require local Zoning Board approval.

4.13.2 Affected Environment
Evaluation of Wetland Functions and Values

"The evaluation of wetland functions and values provided in this Section follows the "Descriptive Approach" provided in the Highway Methodology Workbook Supplement."

The City of Warwick Comprehensive Plan has determined that diminishing wetland resources are of special importance to the City because the rare wetland habitats within the suburban core provide a functional role as vital components of hydrologic systems, and home for unique and important wildlife habitat.

ADD: To the descriptive approach a section dedicated to the evaluation of wetland and water quality values. The evaluation should include a detailed Water Quality and Wetland Assessment whereby all the identified wetland systems are indexed then scored and ranked as to their the overall functionality and performance. Specific analysis should focus on biological, water quality and hydrologic functions.

"Public access to Warwick Pond is very limited and there is no public boat ramp. Recreational activities observed at Warwick Pond include swimming, boating, and fishing enjoyed by shoreline residents. ***Recreation and aesthetics is a principal value provided by the pond****."*

Incorrect statement: Warwick Pond also contains a very high and unique biological value supporting runs of anadromous alewife.

AMEND: Warwick Pond provides the community with valuable recreational aesthetic values within a unique aquatic environment that supports runs of anadromous alewife.

4.13.2 Affected Environment
Wetlands South of the Project Area (Apponaug)

"*Gorton Pond supports runs of anadromous alewife and catadromous American eel. A small public beach at the southeastern side of the pond along Route 1 provides recreational opportunities for residents." "Fishing activities are concentrated along the pond shore as* ***there is no public boat launch****."*

AMEND: "Fishing activities occur throughout the pond on non-motorized boats and along shoreline ~~are concentrated along the pond shore as there is no public boat launch~~." The City maintains a highly used public boat ramp at the Police Station. In addition, the fishing resources in this pond are of such high value the City is considering installation of a fishing pier at that location.

Wetland A5 *– ''Wetland and Buckeye Brook between Airport and Lake Shore Roads chain link fence." "26 The wetland* ***provides limited*** *wetland Wildlife Habitat."*

AMEND: *~~"26 The wetland provides limited wetland Wildlife Habitat."~~* Statements including non-definitive terms such as "limited" can be misleading and should be removed in place of quantifiable methods such as a comprehensive Wetland Assessment suggested earlier. Accurate assessment of "value" within the urban complex ought to be articulated through evaluation and scoring prior to assessing a term such as "limited".

Wetland A8 ***"****occurs partially on-Airport Property (the Project Area). This wetland is described under the Study Area wetlands, since the majority of the wetland is outside of the Project Area."*

AMEND: Due to projected on-field drainage and infrastructure improvements the wetland A8 complex could be fundamentally impacted even though a majority of the wetland complex is off-site. The abbreviated review should be expanded to full analysis of the entire wetland complex.

4.13.3 Summary

"Wildlife habitat values of these wetlands are limited by the quality of the wetlands, and because the airport perimeter fence restricts movement of mammal species. Wetlands in the southeastern and northern portions of the Airport have been encroached into by past landfill operations, gravel removal, ditching, and road and runway construction. ***These encroachments reduce the functional values of these wetlands."***

SUPPORT: This statement must be altered to include a more comprehensive perspective on the role of wetlands in the community. The small amount of wetlands that remain within the City provide the lone habitat for wildlife and aquatic species within the urban complex. Therefore, in some ways the "value" of the wetlands in this urban complex may be arguably more valuable regardless of their condition because of the finite number of wetland habitats available. While the so called "function" of the wetland maybe limited, it's importance as the last remaining areas available for wildlife habitat are of utmost importance to the community.

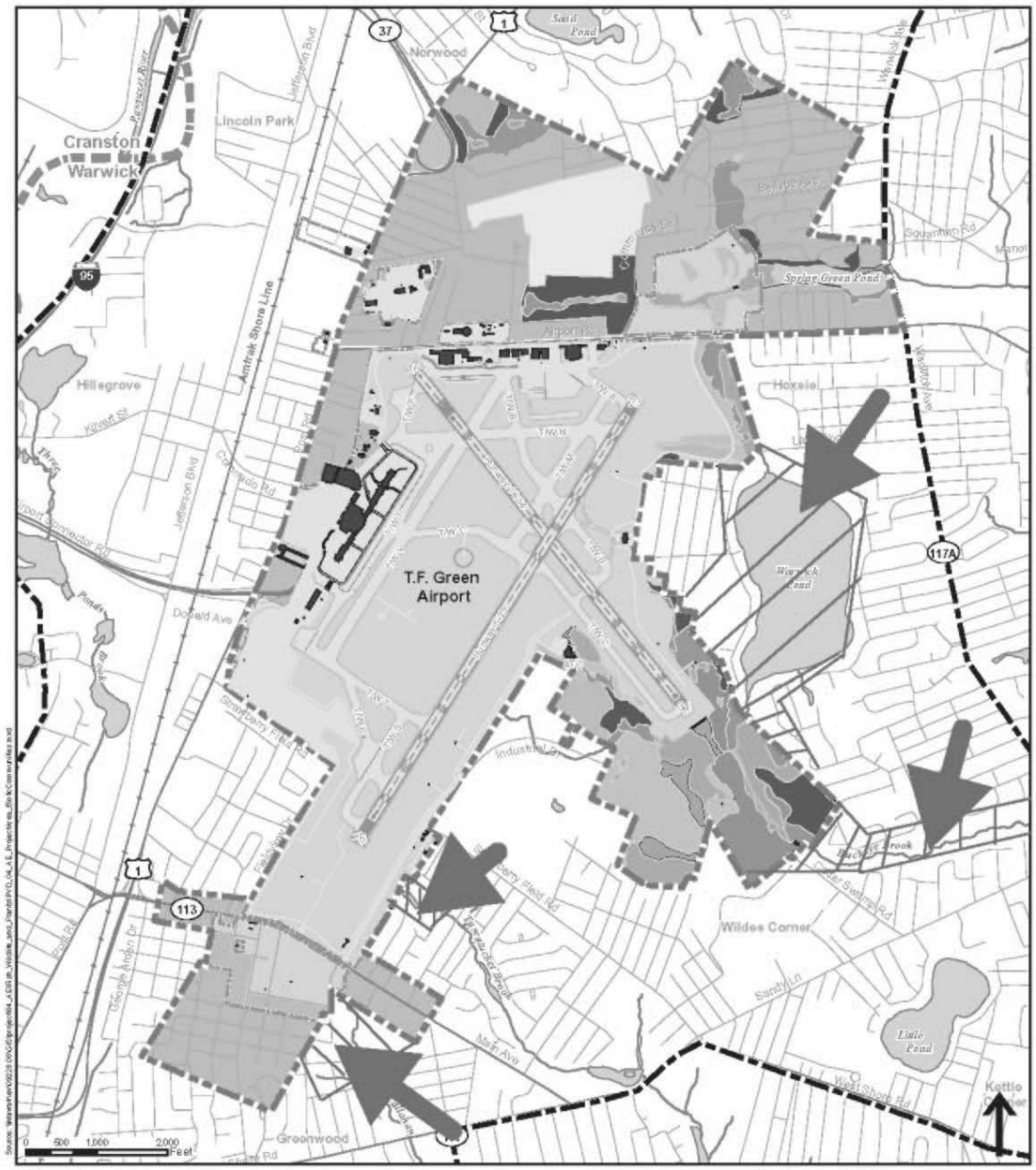
AMEND: **"**These encroachments reduce the functional values of these wetlands **but within the built environ represent some of the only remaining habitat capable of supporting mammals, reptiles, amphibians and numerous bird species.**

ADDRESS: Appraise the wetland's "value" as it pertains to aesthetic visual resource and buffer supporting the scenic integrity and attractiveness of an otherwise built -out community. Certain wetland areas provide a greater buffer between the community and user groups. Define and index the buffer value of the wetlands within the study area.

4.11 Fish, Wildlife, and Plants

Expand: The current study area does not reflect the total impact on the entire natural corridors that exist around the airport landuse. The limited "in the fence analysis" included within the draft is wholly inadequate and does not accurately reflect a complete assessment of the affected environment. Other than larger mammals; birds, aquatic species, reptile and amphibians do not recognize a chain link fence as a habitat boundary. The scale of the preferred alternative will induce impacts that will extend well beyond the perimeter fence. A more appropriate means of study would include a comprehensive systems approach composed of analysis of the entire habitat of affected fish, wildlife and plants species.

- The study area must be expanded to include Buckeye Brook to Mill Cove, Warwick Pond and the headwaters of two streams south of Strawberry Filed Road. Please see accompanying map.



4.11.4 Summary

The summary and study for wetlands as well as for Fish, Wildlife, and Plants is deficient a precise method of functional assessment that is relevant to this City. The wetland functions and values in the study area are incomplete a comprehensive analysis of uniqueness and value based on rarity of habitat.

The level of benefit MUST BE BASED on functional assessment on the health of the ecosystem proportionate with the remaining habitat available within the City. The plants, animals, and aquatic species should be summarized by functional ratings against their value in the entire ecosystem within the urban/suburban core not against the optimal condition. The City of Warwick has put a premium preserving, protecting and enhancing remaining wetland ecosystems in which plants, animals and fisheries may thrive. Subjective analysis as contained within the draft is ineffective in determining scale and proportion of impact from the preferred alternative.

4.5 Surface Transportation

"Study Area Intersections"

Due to the location of the airport land use in the geographic center of the City, east-west circulation is limited to two arterial roadways. Airport Road serving residents located in the Northeastern portion of the City and Main Avenue serving the points south and east in the City. Constraints on the aforementioned roadway systems have the potential for far reaching impacts especially at the intersection of RT. 117 and Main Avenue. Following the reasoning for including the intersection of Airport Road and Warwick Avenue, the City requests including the following signalized intersections.

ADD: MAIN Avenue and RT. 117, Main Avenue at Buttonwoods Ave.

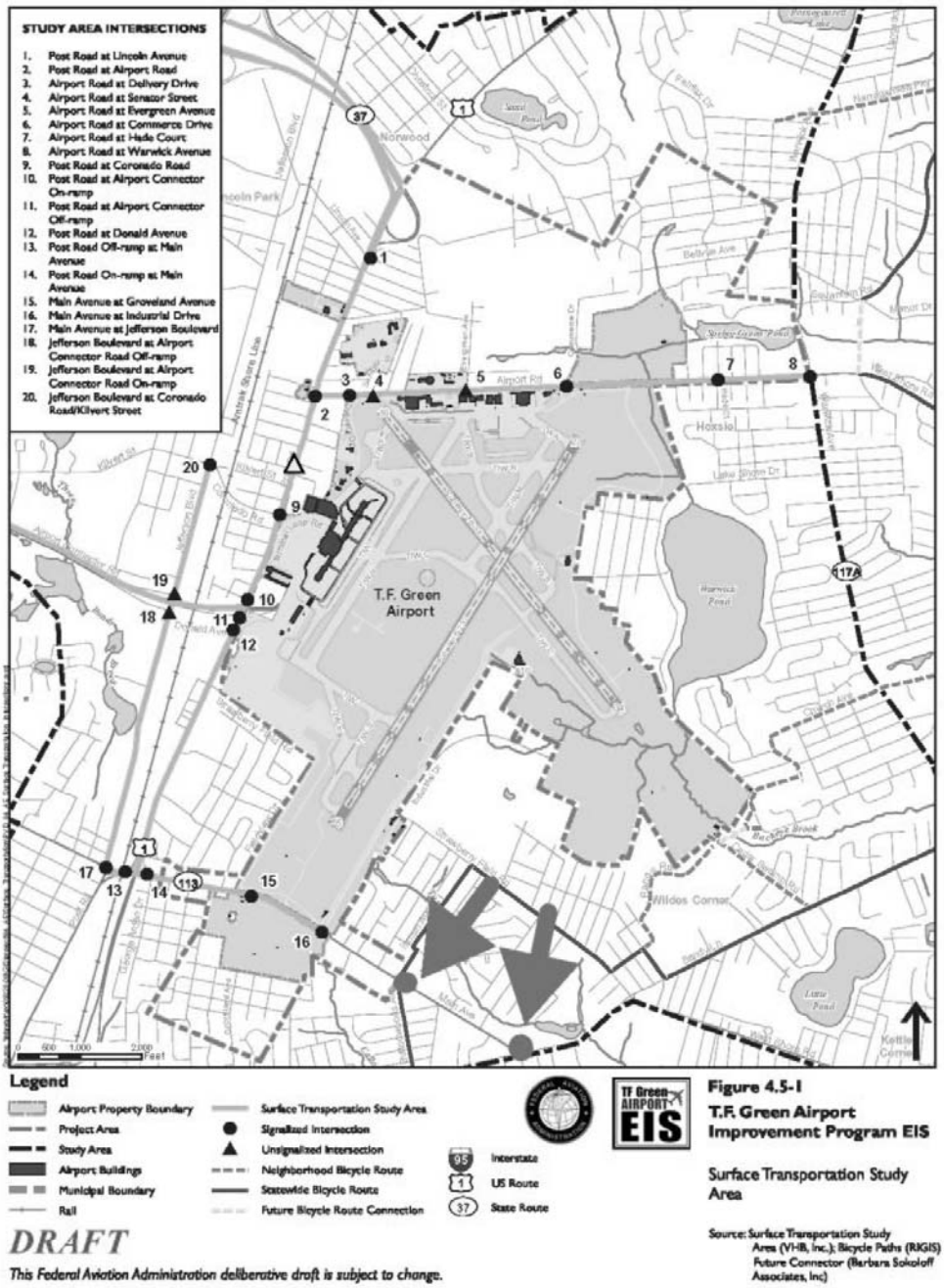


Figure 4.5-1
T.F. Green Airport Improvement Program EIS

Surface Transportation Study Area

Source: Surface Transportation Study Area (VHB, Inc.); Bicycle Paths (RIGIS) Future Connector (Barbara Sokoloff Associates, Inc)

ADD: Study Area Intersections

- **MAIN Avenue at RT. 117**
- **Main Avenue at Buttonwoods Ave.**

Table 4.5-8 Privately-Owned Off-Airport Public Parking Facilities

"Privately-Owned Off-Airport Public Parking"

"Off-Airport parking considered in this EIS consists of approximately 3,700 spaces at four facilities. Table 4.5-8 2 summarizes the parking locations, capacity, rates, and utilization. All facilities provide shuttle services to the Terminal. Figure 4.5-5 shows the location of the public parking facilities."

ADD: Parking spaces dedicated to the park and fly program employed by area hotels

END - Section 1

CITY OF WARWICK
PLANNING DEPARTMENT

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February 1, 2006

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RE: City of Warwick Comments – Section 2 of 2
"Group 1 Affected Environment"
Environmental Impact Statement (EIS)
T.F. Green Airport by Vanasse Hangen Brustlin, Inc., (VHB)

Dear Ms. Lurie,

Please find enclosed the second document containing the City of Warwick comments on the draft "Group 1 Affected Environment Analysis" conducted by Vanasse Hangen Brustlin, Inc., (VHB) for the T.F. Green Airport Environmental Impact Statement (EIS).

I forwarded you the following sections; **4.8 Water Quality, 4.8.1.4 Coastal Zone Act Reauthorization Amendments (CZARA) and Rhode Island Coastal Resources Management Council (CRMC), 4.8.1.5 Chapter 22, Article VII of the City of Warwick Code of Ordinances — Buckeye Brook Protection, 4.8.2 Methodology, 4.8.3 Surface Water Resources, 4.8.3.1 Warwick Pond, 4.8.3.2 Buckeye Brook, 4.8.3.6 Greenwich Bay, 4.8.5 Water Quality, 4.8.5.1 Roads and Parking Lots, 4.8.5.4 Deicing operations, 4.8.7.1 Airport RIPDES Permit, 4.12.2 Potential Threatened and Endangered Species, 4.18 Hazardous Materials, Pollution Prevention, and Solid Waste.**

If you should have, any questions regarding these comments please feel free to call me at 738-2000.

Sincerely,

Mark Carruolo
Planning Director

4.8 Water Quality

*"**Major surface water resources** in the vicinity of the Airport include water bodies such as Warwick Pond and Tuscatucket Brook. Surface waters on the Airport property include Buckeye Brook and other unnamed streams. Groundwater is water below the earth's surface in the zone of saturation. **This resource includes the Providence/Warwick Groundwater Reservoir which lies mostly west of the Airport**."*

BACKGROUND: Over the last ten years the City of Warwick has invested significant resources on study of Greenwich Bay an it's watershed. Narragansett Bay and Greenwich Bay are universally accepted as the most important natural resources within both the City of Warwick and State of Rhode Island. Over the years, these important resources have been subjected to ever-increasing levels of both of pollution from point and non-point sources. The result has been fish kills in Greenwich Bay as well as fisheries and beach closures costing millions of dollars to the economy.

ADD: Within the water quality pre-amble acknowledge the aforementioned facts and travel establishing a link between the proposed alternative and it's potential impact on Greenwich Bay.

ADD: *"Major surface water resources in the vicinity of the Airport include water bodies such as Warwick Pond, Tuscatucket Brook* **and Greenwich Bay."**

ADD: *"Groundwater is water below the earth's surface in the zone of saturation. This resource includes the Providence/Warwick Groundwater Reservoir which lies mostly west of the Airport* ***and the northern watershed sub-basin which has shown to contribute groundwater to the Greenwich Bay resource."***

ADD: Contact CRMC to obtain groundwater study from Professor Daniel Urish study, University of Rhode Island. Integrate groundwater/pollutant contribution data into water quality section.

ADD: a paragraph about the Greenwich Bay watershed and both surface and groundwater contribution to Greenwich Bay and the water quality studies performed by the University of Rhode Island/CRMC.

4.8.1.4 Coastal Zone Act Reauthorization Amendments (CZARA) and Rhode Island Coastal Resources Management Council (CRMC)

"Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) addresses non-point pollution in coastal waters and requires the applicable states to develop programs to control such pollution. The Rhode Island Coastal Resources Management Council (CRMC) is responsible for the management, protection, and restoration of Rhode Island coastal areas. The CRMC's jurisdiction includes natural and cultural shoreline features, coastal wetlands, any activities that occur in the Rhode Island's tidal waters, and some statewide activities (including power generation and chemical processing). ***The CRMC's authority also extends inland where the CRMC has developed Special Area Management Plans (SAMPs) to manage environmental problems 24 in watersheds of critical estuaries****. "*

ADD DIALOGUE: Must recognize and dedicate greater discussion on the recently completed Special Area Management Plan (SAM) for Greenwich Bay. The SAM plan is a significant regulatory tool for both the CRMC and the City. It's finding and recommendations will become a functional element of the Comprehensive Plan and the basis for local zoning regulation in the areas of buffer setbacks and introduction of best management practices.

ADD NEW SECTION: 4.8.1.4**.a** Rhode Island Coastal Resources Management Council (CRMC) **Greenwich Bay Special Area Management Plan. The section would include specific regulatory highlights of the Plan provided by CRMC and City.**

ADD: Include facts and travel including the SAM Plan itself.

4.8.1.5 Chapter 22, Article VII of the City of Warwick Code of Ordinances — Buckeye Brook Protection

"This section of the Code of Ordinances protects Buckeye Brook, which is located in both the Project and Study Areas, from waste disposal, including liquid discharges and solid dumping. This includes the physical boundaries of Buckeye Brook, Old Mill Creek, Mill Cove, and the associated ponds and tributaries including Warwick Pond, Lockwood Brook, and Knowles Brook. ***However, this ordinance does not apply to any entity holding a valid RIPDES permit and therefore does not apply to the Airport."***

REASONING: Due to pending investigation and legal issues regarding deicing discharge into Buckeye Brook the statement regarding the RIPDES permit is not as definitive as reflected in this statement.

DELETE: ~~However, this ordinance does not apply to any entity holding a valid RIPDES permit and therefore does not apply to the Airport~~

4.8.2 Methodology

"The Project Area is the area in which the proposed T.F. Green Airport Improvements Program could result in direct physical impacts. The Study Area is the area within which the proposed Airport Improvements Program could result in indirect impacts as a result of any of the alternatives being considered in this DEIS."

> **ADD:** *The Project Area is the area in which the proposed T.F. Green Airport Improvements Program could result in direct physical impacts* **on and off airport property**. *The Study Area is the area within which the proposed Airport Improvements Program could result in indirect impacts* **on and off airport property** *as a result of any of the alternatives being considered in this DEIS."*
>
> **RATIONAL: Establish a "cause and effect" or "nexus" between on-field activities and impact on offsite resources *(such as Greenwich Bay and Buckeye Brook)* located afar from the airport and outside the project area.**

"The groundwater information gathered in this report was collected from existing data, maps, and reports as it relates to the water quality of the Airport and the surrounding region. ***This information was supplemented by the RIDEM's Rules and Regulations for Groundwater."***

> **RESPONSE: Meet with and gather information from CRMC on previous studies conducted within the Northern Watershed of Greenwich Bay.**

4.8.3 Surface Water Resources

"Airport contributions come both as discharge from outfalls and as runoff from undeveloped areas of Airport property. The contributions from outfalls are most likely to contain Airport-related contaminants like ***deicing chemicals and rubber from tires and are the most relevant to water quality****. Table 4.8-2 indicates the regulatory classifications for the surface waters affected by Airport discharge."*

> **BACKGROUND: The first flush from the acres of impervious runway, taxiways and apron areas may contribute a variety of contaminants including fecal contamination to adjacent water resources.**
>
> **ADD:** The contributions from outfalls are most likely to contain Airport-related contaminants like deicing chemicals and rubber from tires **as well as other soluble pollutants which are** the most relevant to water quality.

TABLE 4.8-1 Contributing Areas to Surface Waters

"Airport Contribution (acres) Airport Contribution (%) Water Body Non-Airport Drainage (Acres) 1 Via Outfalls2 Via Runoff Total Drainage Area (acres) Outfalls Total"

COMMENT: The table is somewhat misleading because it does not include the concentration of pollutant loads afforded by each outfall. It is entirely possible that an outfall with a smaller acreage of drainage area could have disproportionate and greater impact on the water resource than an outfall connected to basins with less impervious area and a less demanding landuse. An outfall to a collection system draining the airport apron may present a greater risk of pollutant loading than a outfall draining a greater area of previous area without the same intensity of land use.

AMEND TABLE: this table must be amended to include sampling data at the outfalls as a percentage of pollutant loading or include a narrative describing the aforementioned fact.

4.8.3.1 Warwick Pond

"Warwick Pond does not currently meet state water-quality standards due to low levels of dissolved oxygen (hypoxia), excess phosphorus, and excess algal growth. ***The causes of this eutrophication have not been identified, and may include multiple sources****."*

AMEND: ***The causes of this eutrophication ~~have not been identified,~~ ~~and~~ may include multiple sources the most apparent being deicing material used in airport operations.***

4.8.3.2 Buckeye Brook

SPECIFICS: The Buckeye Brook Coalition is a state designated Watershed Council and maintains a vitally important role within the community. The coalition is widely recognized as a preeminent organization dedicated to preserving, protecting and enhancing the rich habitat of Buckeye Brook. The City recommends meeting with the organization and visiting their website to secure a greater understanding of the resource's attributes within the community. http://www.buckeyebrook.org/

SUPPLEMENT: the section must contain a narrative reflecting the importance and recreational use of the Buckeye Brook resource in the City of Warwick. This section must identify these efforts and the importance of Buckeye Brook for fishing and recreation. Review of the narrative for Warwick Pond includes a similar acknowledgement.

ADD: Narrative describing the well-publicized issue of contamination from deicing agents and the outstanding investigation being conducted.

4.8.3.6 Greenwich Bay

*"**Some parts of Greenwich Bay receive significant inputs of fecal coliform from its tributaries**.[23] Heavy precipitation greatly reduces the water quality in the Bay."*

SUPPLEMENT: University (URI) studies have revealed that Greenwich Bay receives groundwater recharge from the northern watershed sub-basin that is part of the airport study area. The groundwater contribution is in part do to the highly permeable out wash soils that underlie the area. The rapid movement through area out-wash soils permit rapid transmission of pollutants to groundwater that recharges into Greenwich Bay.

ADD: include statement recognizing the potential for contamination via groundwater induced into Greenwich Bay through extremely permeable soils found in the northern watersheds. Also, concentrate on the transmission of pollutants and pathogens from outfalls to surface water bodies draining into Greenwich Bay.

4.8.4 Groundwater Resources

"Figure 4.8-3 shows groundwater resources in the Study Area. The thick, coarse-textured sediments of the Warwick Plains Delta hold water in saturated underground layers. ***The Project Area is not located within a public-water- supply reservoir, a groundwater-recharge area, or a wellhead-protection area. Most importantly, the Airport is not located within a sole-source aquifer. The Providence/Warwick Groundwater Aquifer is under the southwestern portion of the Airport (Figure 4.8-3), but groundwater is not used for local public drinking water supply."***

ADD: into this section all groundwater related statements included above. University (URI) studies have revealed that Greenwich Bay receives groundwater infiltration from the northern watershed sub-basin that is part of the airport study area. The groundwater contribution is in part do to the highly permeable out wash soils that underlie the area. The rapid movement through the out-wash soils allows rapid transmission of pollutants though to the groundwater and then to Greenwich Bay.

***"Most importantly**, the Airport is not located within a sole-source aquifer."*

AMEND: "~~Most importantly~~, the Airport is not located within a sole-source aquifer but the aquifer may act as a conduit (through recharge) to contribute pathogens and excess nutrients to the Greenwich Bay potentially contaminating their shellfish beds and promoting algal blooms.

*"**Groundwater movement is assumed to be from the northwest to the southeast**, generally towards Greenwich Bay. Groundwater downgradient of the Airport may discharge as baseflow in Buckeye Brook, Tuscatucket Brook, and other local streams. Observed dry-weather discharge from the Airport outfalls may indicate groundwater infiltration into the stormwater drainage system."*

ISSUE: this assumptive hypothesis may not be corroborated by University of Rhode Island groundwater studies of Greenwich Bay.

ACTION: Substantiate the statement with fact or remove the statement.

4.8.5 Water Quality
4.8.5.1 Roads and Parking Lots

*"A shallow depression in the infield (Drainage Area 8) detains stormwater, allowing pollutants to settle out before the water is released off-site. Other grassy areas in the **airfield encourage infiltration, reducing runoff flow and removing pollutants**."*

AMEND: *Other grassy areas in the airfield encourage infiltration, reducing runoff flow **and removing some** pollutants."*

4.8.5.2 Runways and Taxiways

*"Similar to conventional roads, runways and taxiways can contribute metals, hydrocarbons, salts, and sediments to runoff. **However, the aircraft traffic volumes (and therefore the contributions of these contaminants) on a runway or taxiway is negligible compared to that of a conventional road."***

REMOVE: ~~However, the aircraft traffic volumes (and therefore the contributions of these contaminants) on a runway or taxiway is negligible compared to that of a conventional road."~~

RATIONAL: this statement is only correct if "traffic volume" is the only study perimeter. This misleading supposition does not have a place in this part of the baseline-gathering portion of the EIS.

4.8.5.4 Deicing operations

"*RIAC has implemented a glycol-recovery program to minimize the environmental impacts of aircraft deicing activities. Collecting glycol from runoff both allows reuse of the chemical and improves the quality of the receiving waters. Runoff is retained in deicing areas through the use of inserts in existing catch basins. Valves in storm drain inserts can be closed so the deicing areas retain the glycol solution, which is collected for recycling or disposal, as appropriate. A glycol interceptor has been installed upstream of the two oil/water separators in the infield (Drainage Area 8). The interceptor takes real-time measurements of glycol concentrations. Stormwater flows with glycol concentrations above 3 percent are diverted to a portable 20,000-*

gallon tank. Three mobile-collection units (augmented by vacuum trucks as necessary) are employed to collect spent ADF."

ADD: Discussion as to the effectiveness and shortcomings of the deicing procedures used at the airport as well as document all the complaints of deicing material releases in the surrounding waterbodies in the immediate past.

ADD: Detailed description of existing spill containment plans.

SUPPLEMENT: include A NEW subsection that provides a detailed description and composition of deicing agents used at T.F. Green Airport and the manner in which they breakdown and effect neighboring water quality. Explain the manner in which deicing agents impact waterbodies including effect on algae blooms, oxygen demand, toxicity and residence time.

4.8.6 Existing Water Quality

"Outfall 002A discharges runoff from Drainage Area 1, the Airport's second-largest drainage area. This ***area includes fueling and deicing locations****. Prior to discharge, the runoff is treated using an oil/water separator and a Vortechs treatment system. The outfall discharges to Buckeye Brook north (upstream) of Warwick Outfall 003A discharges runoff from Drainage Areas 2 and 3, the third-largest drainage area at the Airport. This area includes runways and taxiways. The outfall discharges to Buckeye Brook north of Warwick Pond. Outfall 008A discharges runoff from Drainage Area 8, the largest drainage area of the Airport. This area* ***includes fueling and deicing locations****, in addition to taxiways, runways, and parking. Prior to discharge, a portion of the runoff passes through a detention basin and is treated using an oil/water separator, a Vortechs treatment system, and an odor-control system. The outfall discharges to Buckeye Brook south (downstream) of Warwick Pond."*

INCLUDE DOCUMENTATION: Dissolved oxygen and other water quality concerns related to the use of deicing chemicals at T.F. Green Airport must be profiled within the Water quality section of this document with specific attention given to Buckeye Brook and Warwick Pond, the most directly impacted from release of deicing.

"sampling data for the outfalls are limited, and older sampling ***data <u>are not representative of current operations</u>*** *due to updated glycol-containment procedures at the Airport. Therefore,* ***<u>the most relevant outfall data come from winter 2004 and 2005</u>*** *(Table 4.8-4) winter events, and for Summer 2005 (Table 4.8-5)."*

INCOMPLETE DATA SET: "the <u>most relevant outfall data</u> come from winter 2004 and 2005" **This data is insufficient to establish an appropriate baseline condition. Additional data should be collected.**

"Deicing did increase glycol concentrations at Outfalls 003A and 008A, which increased biological and chemical oxygen demand in the discharges to Buckeye Brook."

> **ADD: "**Deicing did increase glycol concentrations at Outfalls 003A and 008A, which increased biological and chemical oxygen demand in the discharges to Buckeye Brook **by %."**

"the release of propylene glycol increases oxygen demand, reducing dissolved oxygen concentrations downstream. Glycol and chemical oxygen demand concentrations decrease between the inlet and outlet of Warwick Pond and in Buckeye Brook between Route 117A and Route 117, likely due to natural attenuation. At all four sampling points, the dissolved oxygen concentrations drop approximately 15 hours after the peak glycol concentrations occur and remain low for 4 to 12 hours before rebounding. The February event showed the same trends."

> **ADD:** "the release of propylene glycol increases oxygen demand, reducing dissolved oxygen concentrations downstream **by % over the non-impacted baseline condition.**

4.8.7.1 Airport RIPDES Permit

"RIAC holds a RIPDES permit for discharges from the Airport that was issued in 1987. The permit has specific quality and sampling requirements. In 2003, RIAC applied for re-issuance of the RIPDES permit to obtain coverage for stormwater discharges associated with an industrial activity. RIDEM issued a RIPDES Permit ***in November, 2004 and RIAC filed an appeal****. RIDEM issued a stay of the permit and required continued compliance with the RIPDES Permit issued in 1987."*

> **UPDATE: The recent events highlighting the variation between latest RIDEM permit and RIAC's legal position.**

4.12.2 Potential Threatened and Endangered Species

"most concern is the Warwick Pond/Buckeye Brook complex that supports an anadromous fish run and unique freshwater tidal wetland. ***The referenced tidal freshwater wetland is located in Mill Cove (outside of the Study Area****)."*

> **ADD*:* Mill Cove should be included within an expanded study because there exists a homogeneous and ecological link between actions occurring on airport property and impacts on natural corridor outside the study area.**

4.18 Hazardous Materials, Pollution Prevention, and Solid Waste

Truk-Away Landfill

"Subsequently, in May 2005 the RIDEM Office of Waste Management sent a letter to the RIDOA requesting a Work Plan outlining the future investigation activities planned to identify the extent of PCB/separate phase petroleum contamination, and any outstanding investigation activities associated with assessing the overall impacts the landfill may have on other receptors. As of this date, a ***Draft Work Plan has been submitted to RIDEM for review, but has not yet been accepted by the RIDEM."***

UPDATE: this section should be expanded to include a detailed analysis of outstanding issues including a report on timeframe. Suggest a direct meeting with RIDEM officials.

End section 2 of 2